WHAT IS CLAIMED IS:

1. A method of manufacturing a semiconductor device, comprising the steps of:

forming an amorphous semiconductor film over a substrate:

irradiating the amorphous semiconductor film with a first laser beam to form a first crystalline semiconductor film; and

irradiating the first crystalline semiconductor film with a second laser beam to form a second crystalline semiconductor film.

- 2. A method according to claim 1, wherein the first laser beam and the second laser beam are different in wavelength from each other.
- 3. A method of manufacturing a semiconductor device, comprising the steps of:

forming an amorphous semiconductor film over a substrate;

irradiating the amorphous semiconductor film with a first laser beam to form a first crystalline semiconductor film; and

irradiating the first crystalline semiconductor film with a second laser beam to form a second crystalline semiconductor film, wherein

the first laser beam is 126 to 370 nm in wavelength.

4. A method of manufacturing a semiconductor device, comprising the steps of:

irradiating the amorphous semiconductor film with a first laser beam to form a first crystalline semiconductor film; and

irradiating the first crystalline semiconductor film with a second laser beam to form a second crystalline semiconductor film, wherein

the second laser beam is 370 to 650 nm in wavelength.

5. A method of manufacturing a semiconductor device, comprising the steps of:

forming an amorphous semiconductor film over a substrate;

irradiating the amorphous semiconductor film with a first laser beam to form a first crystalline semiconductor film; and

irradiating the first crystalline semiconductor film with a second laser beam to form a second crystalline semiconductor film, wherein

the first laser beam is 126 to 370 nm in wavelength whereas the second laser beam is 370 to 650 nm in wavelength.

- 6. A method according to claim 1, wherein the semiconductor device is a liquid crystal display device or a light emitting device.
- 7. A method according to claim 1, wherein the semiconductor device is a cellular phone, a video camera, a digital camera, a projector, a goggle type display, a personal computer, a DVD player, an electronic book, or a portable information terminal.
- 8. A method according to claim 3, wherein the semiconductor device is a liquid crystal display device or a light emitting device.
- 9. A method according to claim 3, wherein the semiconductor device is a cellular phone, a video camera, a digital camera, a projector, a goggle type display, a personal computer, a DVD player, an electronic book, or a portable information terminal.
- 10. A method according to claim 4, wherein the semiconductor device is a liquid crystal display device or a light emitting device.
- 11. A method according to claim 4, wherein the semiconductor device is a cellular phone, a video camera, a digital camera, a projector, a goggle type display, a personal computer, a DVD

player, an electronic book, or a portable information terminal.

- 12. A method according to claim 5, wherein the semiconductor device is a liquid crystal display device or a light emitting device.
- 13. A method according to claim 5, wherein the semiconductor device is a cellular phone, a video camera, a digital camera, a projector, a goggle type display, a personal computer, a DVD player, an electronic book, or a portable information terminal.